

Appl. No. 09/671,005  
Amdt. dated December 6, 2006  
Reply to Office Action of October 30, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please cancel claims 1, 12-30 and 39 without prejudice and amend claims 2, 3, 8, 10, 31, 32, 36 and 38 as follows:

1. (Canceled)
2. (Currently amended) The method of claim 1-8 wherein the indication of risk is a probability of default.
3. (Currently amended) The method of claim 1-8 wherein the proportional hazards model is of the form:  $h(t | Z) = h_0(t) * \exp(\beta^T Z)$ , where  $h(t)$  is a hazard rate at time  $t$ ,  $Z$  is a vector of covariates, and  $\beta$  is a vector of regression coefficients.
4. (Original) The method of claim 3 wherein the hazard rate represents a risk of default.
5. (Original) The method of claim 4 wherein the hazard rate is represented by a binary variable which indicates whether default was observed or not, and a time observed variable.
6. (Original) The method of claim 5 wherein the time observed variable is either a time to default or if default did not occur, a time until observation was censored.
7. (Original) The method of claim 5 further comprising the step of:

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storing in a database the binary variables and the time observed variables for a plurality of past loans.

8. (Currently amended) A method for providing an indication of risk of a loan contemporaneously with origination of the loan, the method comprising the steps of:  
receiving mortgage loan data for an applicant for a loan, said mortgage data including data regarding occurrence of an event relevant to the loan and also time to the event;  
analyzing the received data utilizing a proportional hazards model to take into consideration not only the occurrence of an event relevant to the loan, but also the time to the event;  
computing the indication of risk for the loan using a computer with memory;  
transmitting the computed default probability for the loan; and

~~The method of claim 1 further comprising the step of:~~

additionally analyzing the received data utilizing a hat function model to allow nonlinear effects to be modeled in a continuous fashion.

9. (Original) The method of claim 8 wherein an independent variable,  $X$ , is mapped to a series of independent variables  $X_i$  which meet the constraints that  $X_i$  is a continuous variable over the range  $[0, 1]$  and each  $X_i$  is defined by a fuzzy membership function.

10. (Currently amended) The method of claim ~~1-8~~ further comprising the step of:  
transmitting a report to a potential loan originator including the indication of risk and highlighting a variable or variables recognized as contributing to the computed indication of risk in a substantial way.

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11. (Original) The method of claim 10 wherein the indication of risk is a probability of default.

12-29. (Canceled)

30. (Canceled)

31. (Currently amended) The system of claim ~~30~~ 36 wherein the proportional hazards model is of the form:  $h(t | Z) = h_0(t) * \exp(\beta^T Z)$ , where  $h(t)$  is a hazard rate at time  $t$ ,  $Z$  is a vector of covariates, and  $\beta$  is a vector of regression coefficients.

32. (Currently amended) The system of claim ~~30~~ 36 wherein the hazard rate represents a risk of default.

33. (Original) The system of claim 32 wherein the hazard rate is represented by a binary variable which indicates whether default was observed or not, and a time observed variable.

34. (Original) The system of claim 33 wherein the time observed variable is either a time to default or if default did not occur, a time until observation was censored.

35. (Original) The system of claim 33 further comprising:

a database storing the binary variables and the time observed variables for a plurality of past loans.

36. (Currently amended) ~~The system of claim 30~~ A system for predicting a default probability of a loan contemporaneously with origination of the loan, the system comprising:  
a server receiving mortgage loan data for an applicant for a loan;

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the server including a programmed processor operable to analyze the received data  
utilizing a software based proportional hazards model;  
the server further operable to compute the default probability for the loan; and  
a communication mechanism to transmit the computed default probability, wherein the  
server is further operable to analyze the received data utilizing a hat function model to allow  
nonlinear effects to be modeled in a continuous fashion.

37. (Original) The system of claim 36 wherein an independent variable,  $X$ , is mapped  
to a series of independent variables  $X_i$  which meet the constraints that  $X_i$  is a continuous variable  
over the range  $[0, 1]$  and each  $X_i$  is defined by a fuzzy membership function with said mapping  
stored in a memory.

38. (Currently amended) The system of claim ~~30~~36 further comprising:  
means for automatically generating and transmitting a report to a potential loan originator  
including the computed probability of default and highlighting a variable or variables recognized  
as contributing to the computed probability of default in a substantial way.

39. (Canceled)